



*East German Military Topography for NCOs (1957).*

# Mapping For A Multi-Lingual Military Alliance

## The Case of East Germany

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The military topographic mapping produced by the German Democratic Republic (the GDR or East Germany) was, like all Warsaw Pact mapping, kept highly secret until the fall of the Iron Curtain in late 1989. After the fall, this secrecy was not only removed but formerly secret maps and documents were suddenly released into the public domain in large numbers. Since almost all East German public bodies were replaced with West German pattern ones, the personnel, stocks and records of the former organisations were abruptly discarded in huge quantities. The rate of disposal was such that even records that should have been retained for central archives were discarded. The huge stores of East German military maps and other military geographic documents were dispersed within little more than a year.

The result of this has been that while there are relatively limited official records of the mapping produced by East Germany, a surprisingly large number of documents and maps have survived in private hands. In consequence a considerable German language literature has built up, retrospectively describing and analysing the maps and their makers. Little of this has so far however appeared in English, and the very important inter-relationships of the East German maps and organisations with those of the other Warsaw Pact nations have so far only been considered to a very limited extent in any language. These inter-relationships remain of interest, because they illuminate the complex systems that were used to produce the extensive Soviet mapping of the world. This mapping continues not only to be an important Russian resource but also remains the foundation of the present-day mapping of a number of NATO and other countries.

When the GDR was formally established (without an army or navy) in 1949 maps and mapping organisations already existed. These organisations were the very-much-disrupted remnants of pre-war civilian bodies. The topographic maps were versions of pre-1940 German mapping, which itself largely reproduced pre-1914 mapping with little or no revision. The topography was generally long out of date, the specifications were antique (at 1:100,000 and 1:300,000 relief was still shown by hachures or hill-shading), and the original plates and stones had either been lost at the end of the war or were in western hands. Nevertheless, reproduction material was available and new editions of some maps, and reprints of others, were produced by East German civilian organisations. Until 1952-1953 there seems to have been a presumption that new East German mapping would be developed within the existing German tradition and, for example, a new East German version of the sample-sheet for the existing 1:25,000 map was produced. However, in 1952 a conference of the geodetic organisations of the Socialist countries of Europe took place in Sofia, Bulgaria. At this conference a proposal was accepted that all these countries should produce their maps to a common specification matching the existing Soviet specification and in March 1953 an East German Decree incorporated the conference resolutions into East German law.

Nevertheless it was not until May 1955 that the Warsaw Pact was signed and not until March 1956 was an existing Soviet Army formation recruited from German nationals transferred to East German command to form the nucleus of the new National People's Army (NVA). Only then was it possible to recreate in the German Democratic Republic the interlocking system of civil and military mapping organisations originally developed in the Soviet Union in the 1930s and already copied soon after the Second World War by the other Socialist states of Eastern Europe. Thus only from 1956 onwards could East Germany take its place as a producer of maps for the Warsaw Pact alliance, but from that time it rapidly developed its role.

The organisational framework in the USSR was claimed to have been created by a Decree signed by Lenin himself in March 1919, less than six months



*Soviet Conventional Signs Specifications for Maps at the Scales of 1:25,000, 1:50,000, and 1:100,000 (1983).*



East German ACD 13-16  
 Conventional Signs and Editorial  
 Instructions for Topographic Maps  
 [...] (1984).

after the October Revolution. In actuality Stalin had established the structure in 1935 at a time when opponents of the regime were being sought and purged in enormous numbers, especially in the senior ranks of the party and the armed services. A structure was created in which the Red Army's military cartographic service (which had parallel military and political-commissar command structures) printed and stored maps that were surveyed and prepared for printing by a civilian organisation working under Security Service (NKVD) direction. No one organisation below the Politburo had sole control of the production, storage and use of topographic maps, which were treated as a highly secret resource. At all levels there was tight external oversight of any individual or group of individuals who might be tempted to be disloyal.

In implementing this system in East Germany a very complex structure was created. The maps of East Germany itself were made by a civilian organisation, the *Verwaltung Vermessungs und Kartenwesen* (VVK) which, although a department of the Ministry of the Interior, was closely regulated at all levels by the Ministry of State Security. Training and assistance was

also provided during the 1950s by two Soviet military topographic officers permanently attached to VVK. The maps made by VVK were however printed by a military unit, the *Militärkartographische Dienst* (MKD), under the command of the *Militärtopographische Dienst* (MTD) of the East German National People's Army, which also had responsibility for the main map store. Maps of areas outside East Germany were entirely prepared by the MKD, rather than by VVK. Written military geographical reports and studies were prepared for the MTD by the East German equivalent of the Staff College, although the information available to the College about western European countries was surprisingly limited. At several levels there was close cooperation with (and therefore effective supervision by) equivalent units of the Group of Soviet Forces in Germany. The chains of command, cooperation and reporting linking all the bodies interacting in this system inevitably became extremely complex.

The re-mapping of East Germany to Soviet standards began in 1954. Initially this was based on the recompilation of older material but during the later 1950s and the 1960s the country was progressively re-surveyed at 1:10,000 and new editions were prepared. Thereafter a five-yearly cyclical revision and reissue programme was established and seems to have been maintained until the end of the GDR. Although the specifications of the maps were closely matched to those of the Soviet Union and the other 'Socialist' countries, there were some specific differences. In particular, the basic scale of survey was anomalous. In the Soviet Union the basic scale had only recently been increased to 1:25,000; 1:10,000 surveys were restricted to urban and industrial areas and to some specific areas of intensive agriculture. The East Germans had wanted to continue the 1:5,000 survey of the *Deutsche Grundkarte* but this was vetoed on cost grounds. In any case there was no Soviet precedent for topographic survey at this scale. From the Soviet point of view a 1:10,000 survey of the whole country was probably seen as a compromise and as a concession to local wishes. Where diversity was permitted was in the choice of scripts and languages to be used, both for the writing on the face of the map and for the marginal information. Although the graphical map symbols were rigidly standardised, it was accepted that the Cyrillic alphabet was not widely understood outside the USSR and Bulgaria. Thus each Warsaw Pact country used its own distinctive typefaces, had its own standard terms and abbreviations amplifying the symbol set, and used its own language to lay out the standard marginal information slightly differently.

Soviet specifications for their topographic maps did not remain constant, although changes were evolutionary rather than revolutionary. During the late 1940s and the 1950s there was quite rapid change as the lessons of the Second World War were absorbed and the post-war demands for new symbols with which to map features of the remoter reaches of the USSR were accommodated. Thereafter change slowed down but revised specifications were still issued every ten years for the 1:25,000, 1:50,000 and 1:100,000 maps, and the specifications for other scales were also periodically updated. The knock-on effect of this was that each of the other Warsaw Pact nations had to update their specifications to stay in step.

Despite this, in East Germany there was a desire to maintain some independence and to maintain Germanic procedures. A seemingly tidy system of numbered East German specifications and regulations was created. However, the combined effect of successive changes in the Soviet



The issue of the Soviet Technical  
 Information Collection of the  
 Military Topographic Service  
 containing a review of the East  
 German Military Topography for  
 Officers manual.





East German 1:500,000 sheet M-30-A Cardiff, compiled in 1963 from Bartholemew's Revised Half-Inch Contoured Maps, editions of 1958.

specification and a separate series of alterations in the German element of the maps was that frequent new editions of these specifications were required. There was even a new series of editions issued after the fall of the Berlin Wall, but before the end of the GDR, purely to alter the printed security classification on the maps.

The predominant users of the topographic maps were the armed forces, since civilian official organisations had very limited access to them indeed, and private individuals had none. Teaching 'Military Topography', including basic map-reading and land-navigation for beginners, was thus an inevitable part of initial military training, both for officers and for other ranks. This teaching was coordinated across the nations of the Warsaw Pact, in that the Russian textbook that set the Soviet syllabus also set the framework and content of teaching in the other 'socialist brother-states'.

The Soviet army textbook *Voennaya Topografiya (Military Topography)* was very much the equivalent of the British War Office *Manual of Map Reading, Air Photo Reading and Field Sketching*. Even its format was not unlike that of the inter-war editions of the British manual. From 1933 to 1977 the lead author of this book was the head of

scientific educational works for the Military Topographic Directorate, Major-General of Technical Troops Ilya Alekseevich Bubnov. In the post-war period new editions of this book were issued every five or six years. Following Bubnov's death in 1976 there was a pause in publication, until in 1986 a fully rewritten manual was produced by AA Psarev and others. This remained current far into the post-Soviet period. Although a profusion of subsidiary manuals and teaching aids were produced, all of them were based on the material and structure of the Bubnov (or Psarev) manuals.

There was an obvious need for equivalent German-language material as soon as the NVA was created. In 1957 *Military Topography for NCOs* was produced. This manual was explicitly based on the Bubnov book and as such it clearly conformed to Soviet practice and precedent. It went through several editions with minimal change. A corresponding manual for officers was the obvious next step. This was conceived as an equivalent to *Bubnov* but as an independent production. Published in 1960, it was reissued in 1962. During the Khrushchev era some local autonomy and initiative was encouraged and the GDR officers' manual can be seen as one aspect of this. Following the fall of Khrushchev in 1964 the political climate changed and central direction of activity in the periphery (and tighter security control of maps and topographic information) was re-imposed. In 1966 a review of the GDR officers' manual was published in the *Informatsionno-Tekhnicheskii Sbornik (Technical-Information Collection)* of the Soviet Military Topographic Service. This included the damning passage:

*"In contrast to the textbook on Military Topography for military colleges of the Soviet Army, in this book is set forth in considerable detail the essence and also the technique of making of topographic maps by modern aerial-photographic methods, and an idea of the geodetic foundation is given. This material broadens the knowledge of teachers in the area of topo-geodetic science."*

The GDR manual had revealed material that Soviet officers were not permitted to know. The manual was not reissued and only after a long delay was a replacement manual authorised in 1971 as a limited circulation document for instructors. Only in 1982 at the very end of the Brezhnev



period was East Germany permitted once more to produce a military topography manual for open use.

The exertion of control of the East Germans by the Soviets was nevertheless only one aspect of the relationship between the military mapping authorities of the two countries. After the Second World War the USSR had embarked on ambitious programmes to map the whole of its own vast territory, initially at 1:100,000 and then at 1:25,000. It also began progressively to map the whole world at topographic scales. To achieve this the resources of the entire socialist bloc were required. In effect, segments of the overall task were subcontracted to other Warsaw Pact nations. As with the maps of their own countries these maps were made to a common graphical specification but with the alphabet, typeface, and language of the originating country. What made the system practical was that reproduction material for these maps was exchanged between the different Socialist countries. With this material recipient countries, and in particular the USSR, could then produce parallel versions of the maps with their own alphabets, typefaces and languages combined with the common graphical base.

From the late 1950s East Germany became an active participant in this system. While most of Western Europe had been mapped at the million scale by the Soviets before and during the Second World War, only odd sheets with propaganda value (like the London sheet) had been produced at 1:500,000. The remaining 1:500,000 sheets were produced during the very late 1950s and early 1960s; those of Great Britain were compiled by the GDR from Bartholemew's half-inch maps. At the same time the GDR compiled a set of 1:200,000 maps covering all of West Germany from pre-war material. Larger-scale maps of potential European areas of military activity were however obviously required by the Warsaw Pact armies. During the later 1960s, while Poland was compiling 1:200,000 maps of Britain from 1940s OS material, East Germany compiled up-to-date 1:50,000 mapping of the Netherlands and the northern part of West Germany. This was then shared with Poland, Czechoslovakia and the USSR.

The areas of responsibility of the different Socialist countries shifted with time. When a new 1:500,000 series was prepared in the 1980s, the GDR was not permitted any role in its compilation, even of the sheets of the GDR itself; and by the 1980s the topographic mapping of southern Germany had become the responsibility of the Czechs. Nevertheless until the end of the Warsaw Pact the GDR retained responsibility for the compilation of 1:50,000, 1:100,000 and 1:200,000 mapping for the whole area from the River Oder to the English Channel, including the Benelux countries and France north of Paris. In the context of the times, this zone was centrally important in both NATO and Warsaw Pact planning. In essence the key role of East Germany's military cartographers within the Warsaw Pact alliance was to map the expected theatre of military operations in north-west Europe.

*This article is based on a presentation given at the Maps and Surveys 2009 seminar.*

*Polish edition of the 1:50,000 map N-31-130-D Amsterdam printed in 1972, based on the East German edition compiled in 1967 from sources dated 1963.*

